



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/653,261	08/31/2000	Onur Tackin	36793/CAG/B600	4045
23363	7590	10/05/2004	EXAMINER	
CHRISTIE, PARKER & HALE, LLP			FERRIS, DERRICK W	
PO BOX 7068			ART UNIT	
PASADENA, CA 91109-7068			PAPER NUMBER	
			2663	

DATE MAILED: 10/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/653,261

Applicant(s)

TACKIN ET AL:

Examiner

Derrick W. Ferris

Art Unit

2663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-71 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-71 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 August 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 8/02, 8/02, 2/04.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

Art Unit: 2663

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. **Claims 1-7, 9-14, 16-18, 20-24, 32-35, 38-45, 52-58, 60-65, 67-69, and 71** are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,782,095 B1 to *Leong et al.* (“*Leong*”).

As to **claim 1**, see e.g., background of *Leong* including figure 1. In particular, applicant’s media queue 66 is buffer 108 (shown e.g., in figure 15); applicant’s signal processor 266 is spectral processor 110 and applicant’s cadence processor 268 is logical processor 112. In particular, applicant’s low pass filter 270 is shown as anti-aliasing low pass filter 105; applicant’s bandpass filters 274, 278, 282, 286 are shown as bandpass filters 200-210 and applicant’s power estimator 308, 310, 312, 314, power state machine 316, 318, 320, 322, and frequency calculator 330, 332, 334, and 336 are further taught as part of the spectral processor 110, see e.g., column 2, line 41 – column 3, lines 5.

Applicant’s cadence processor 268 is further taught e.g., at column 3, lines 5-35 with respect to tone detection using temporal characteristics by comparing the duration and cadence. Thus applicant’s steps of selectively analyzing, generating an indicator,

Art Unit: 2663

monitoring a temporal characteristic, and detecting a call progress tone are well established in the prior art.

As to **claims 2-3**, see low pass filter 105 e.g., in figure 1.

As to **claim 4**, see storage 108 used to downsample the signal.

As to **claims 5-7**, see e.g., column 2, line 41 – column 3, lines 35 with respect to estimating the energy (i.e., power), using a threshold, invoking spectral content analysis, and making the comparison over a time period. Since the power is estimated for each bandpass filter, the spectral content analysis comprises differentially detecting a frequency of the downsampled signal.

As to **claim 9**, see e.g., column 2, line 41 – column 3, line 35 with respect to estimating a power and comparing the power to a threshold.

As to **claim 10**, see similar rejection to claim 1.

As to **claim 11**, see similar rejection to claim 2.

As to **claim 12**, see similar rejection to claim 3.

As to **claim 13**, see similar rejection to claim 4.

As to **claim 14**, see e.g., figure 2.

As to **claims 16-18**, see similar rejections to claim 5-7.

As to **claim 20**, see similar rejection to claim 9.

As to **claim 21**, see similar rejection to claim 1.

As to **claim 22**, see similar rejection to claim 2.

As to **claim 23**, see e.g., figure 2 with respect to bandpass filters.

As to **claim 24**, see similar rejection to claim 7.

Art Unit: 2663

As to **claim 32**, see similar rejection to claim 1.

As to **claim 33**, see similar rejection to claims 2 and 4.

As to **claim 34**, see similar rejection to claim 3.

As to **claim 35**, see similar rejections to claims 5 and 7.

As to **claims 38-39**, see tone transmitter 102 in figure 1 and column 2, lines 5-24.

As to **claim 40**, see similar rejection to claim 1.

As to **claim 41**, see similar rejection to claim 2.

As to **claim 42**, see similar rejection to claim 3.

As to **claim 43**, see similar rejections to claims 6 and 7.

As to **claim 44**, see similar rejection to claim 5.

As to **claim 45**, see e.g., column 3, lines 7-35 with respect to a cadence and a threshold.

As to **claim 52**, see similar rejection to claim 1.

As to **claim 53**, see similar rejection to claim 2.

As to **claim 54**, see similar rejection to claim 3.

As to **claim 55**, see similar rejection to claim 4.

As to **claim 56**, see similar rejection to claim 5.

As to **claim 57**, see similar rejection to claim 6.

As to **claim 58**, see similar rejection to claim 7.

As to **claim 60**, see similar rejection to claim 9.

As to **claim 61**, see similar rejection to claim 1.

As to **claim 62**, see similar rejection to claim 2.

Art Unit: 2663

As to **claim 63**, see similar rejection to claim 3.

As to **claim 64**, see similar rejection to claim 14.

As to **claim 65**, see similar rejection to claim 15.

As to **claim 67**, see similar rejection to claim 16.

As to **claim 68**, see similar rejection to claim 17.

As to **claim 69**, see similar rejection to claim 18.

As to **claim 71**, see similar rejection to claim 20.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 8, 15, 19, 25-31, 36, 37, 46-51, 59, 66, and 70** are rejected under 35 U.S.C.

103(a) as being unpatentable over U.S. Patent No. 6,782,095 B1 to *Leong et al.* ("*Leong*") in view of U.S. Patent No. 5,563,942 A to *Tulai*.

As to **claim 8**, *Leong* is silent or deficient to the further limitation wherein the spectral content analysis comprises estimating *a mean* and comparing the mean to at least one frequency range. *Tulai* teaches estimating the mean of the estimated frequency e.g., as part of equation (4) at column 4, lines 22-24. The examiner proposes to modify *Leong* to further include finding the estimated mean of at least one frequency range. Thus the examiner notes that it would have been obvious to one skilled in the art prior to applicant's invention to include finding the estimated mean of at least one frequency

Art Unit: 2663

range. In particular, one skilled in the art would be motivated to find the power means as part of the spectral moment. *Tulai* teaches the above-motivation e.g., at column 4, lines 13-65. Examiner notes a further reasonable expectation of success since *Leong* discloses alternatives such as estimating the power are known in the prior art.

As to **claim 15**, *Leong* is silent or deficient to the further limitation using a complex component. *Tulai* teaches limitation using a complex component e.g., see column 4, lines 33-35. The examiner purposes to modify *Leong* to further include a complex component. Thus the examiner notes that it would have been obvious to one skilled in the art prior to applicant's invention to include a complex component. In particular, one skilled in the art would be motivated to find the power means as part of the spectral moment. *Tulai* teaches the above-motivation e.g., at column 4, lines 13-65. Examiner notes a further reasonable expectation of success since *Leong* discloses that alternative to estimating the power are known in the prior art.

As to **claim 19**, see similar rejection to claim 8.

As to **claim 25**, see similar rejection to claim 6. Not clearly taught is a power state machine. Examiner note that it would have been obvious to one skilled in the art prior to applicant's invention to further include a state machine in calculating the power since state is maintained according to the computations used in the algorithm. As further support, *Leong* teaches commuting the mean/average which requires state to be maintained.

As to **claim 26**, Not clearly taught is a cadence state machine and counter. Examiner note that it would have been obvious to one skilled in the art prior to

Art Unit: 2663

applicant's invention to further include a state machine and counter in calculating the cadence since state must be maintained over a period of time where the period of time is measured over a counted value (i.e., counter). As further support, *Leong* teaches commuting the mean/average which requires state to be maintained.

As to **claim 27**, see similar rejection combined claims 1 and 8.

As to **claim 28**, see similar rejection to claim 4.

As to **claim 29**, see similar rejection to claim 15.

As to **claim 30**, see similar rejection to claim 25.

As to **claim 31**, see similar rejection to claim 26.

As to **claim 36**, see similar rejection to claim 30.

As to **claim 37**, see similar rejection to claim 31.

As to **claim 46**, see similar rejection to claim 8.

As to **claim 47**, see similar rejection to claim 2.

As to **claim 47**, see similar rejection to claim 2.

As to **claim 48**, see similar rejection to claim 14.

As to **claim 49**, see similar rejection to claim 29.

As to **claim 50**, see similar rejection to claim 5.

As to **claim 51**, see similar rejection to claim 45.

As to **claim 59**, see similar rejection to claim 8.

As to **claim 66**, see similar rejection to claim 15.

As to **claim 70**, see similar rejection to claim 19.

Art Unit: 2663

5. **Claims 29 and 49** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,782,095 B1 to *Leong et al.* ("*Leong*") in view of U.S. Patent No. 5,325,425 A to *Novas et al.* ("*Novas*").

As to **claim 29**, *Leong* may be silent or deficient to the further limitation using a complex filter. *Novas* teaches the limitation using a complex filter e.g., figures 4 and 5. The examiner purposes to modify *Leong* to further include a complex filter. Thus the examiner notes that it would have been obvious to one skilled in the art prior to applicant's invention to include a complex filter. In particular, one skilled in the art would be motivated to use a complex filter to provide additional filtering and in particular filtering using digital signal processing. *Novas* teaches the above-motivation e.g., figures 4 and 5. Examiner notes a further reasonable expectation of success since *Leong* discloses that alternative to estimating the power are known in the prior art. *Novas* also discloses that other filtering techniques can be used, see e.g., column 8, lines 4-14.

As to **claim 49**, see similar rejection to claim 29.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Derrick W. Ferris whose telephone number is (571) 272-3123. The examiner can normally be reached on M-F 9 A.M. - 4:30 P.M. E.S.T.

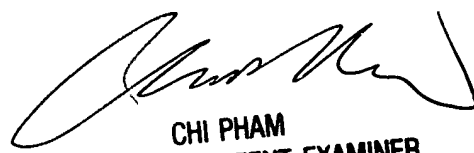
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (571) 272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2663

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Derrick W. Ferris
Examiner
Art Unit 2663

DWF 


CHI PHAM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600 10/1/09